

Ghana Covid Risk Index

L.Boateng

Introduction

Outbreak of corona virus disease (COVID 19) –Dec 2019

Epi-centre

China-Wuhan city-Hubei Province

All continents affected

Globally, as of 2:00am, 26 April 2020

2,810,325 confirmed cases

193,825 deaths (WHO)

African Region

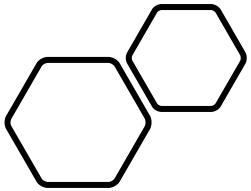
20 316 confirmed

839 deaths

Ghana

1550 confirmed cases

11 death



Project –Ghana Flu Trends 2019



**Analysis 2019 Flu (Upper Resp.
Tract Infections) trends**



**Construct a disease risk index
for Ghana**

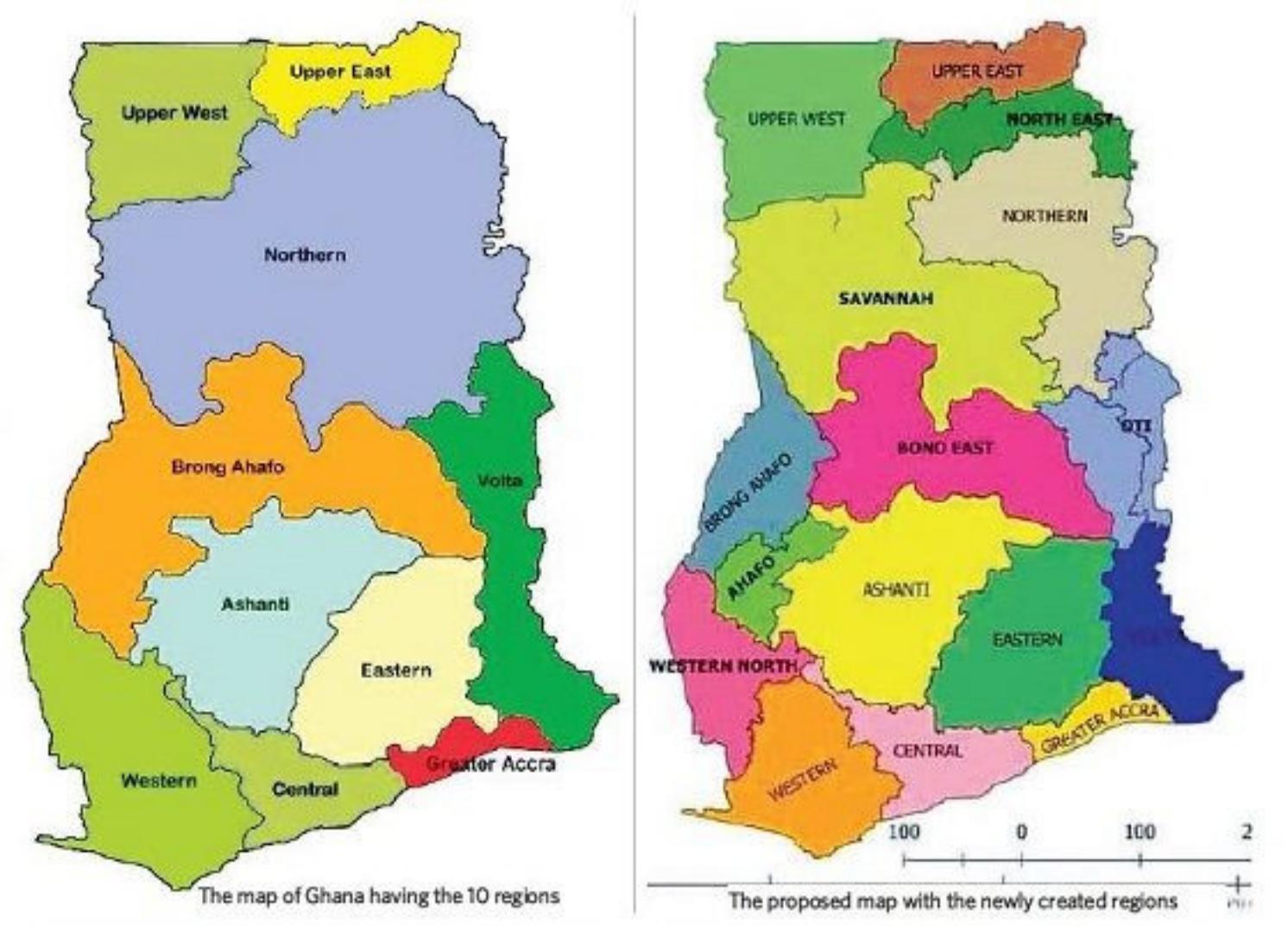


**Provides insights on Ghana's Flu
season**
(May to July) and Oct- Nov.



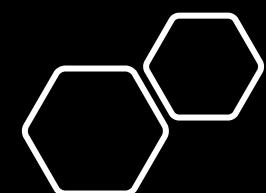
Dataset
DHIMS-2 Health information database of
the Ghana Health Service.

Ghana Regions



Region	CHPS	District	District Hospital	Health Centre	Regional Hospital	Sub-District
Ashanti	1122	30	25	164	1	153
B. Ahafo	665	27	20	131	1	138
Central	364	20	12	75	0	103
Eastern	747	26	18	131	1	206
G. Accra	498	16	8	40	1	70
Northern	459	26	17	105	1	135
Upper East	255	13	6	55	1	91
Upper West	256	11	1	71	1	72
Volta	452	25	17	156	1	132
Western	601	22	16	78	1	119
Ghana	5419	216	140	1006	9	1219
2019		254				

GHS Health Facilities and Org. Unit





Dataset

- Flu data by month
 - Monthly reported cases of districts in Ghana 2019
- Ghana Disease Trend 2017-2019
 - Yearly reported cases of Malaria, Anemia, HPTN, DM, URTI
- Shape files for Ghana

Steps

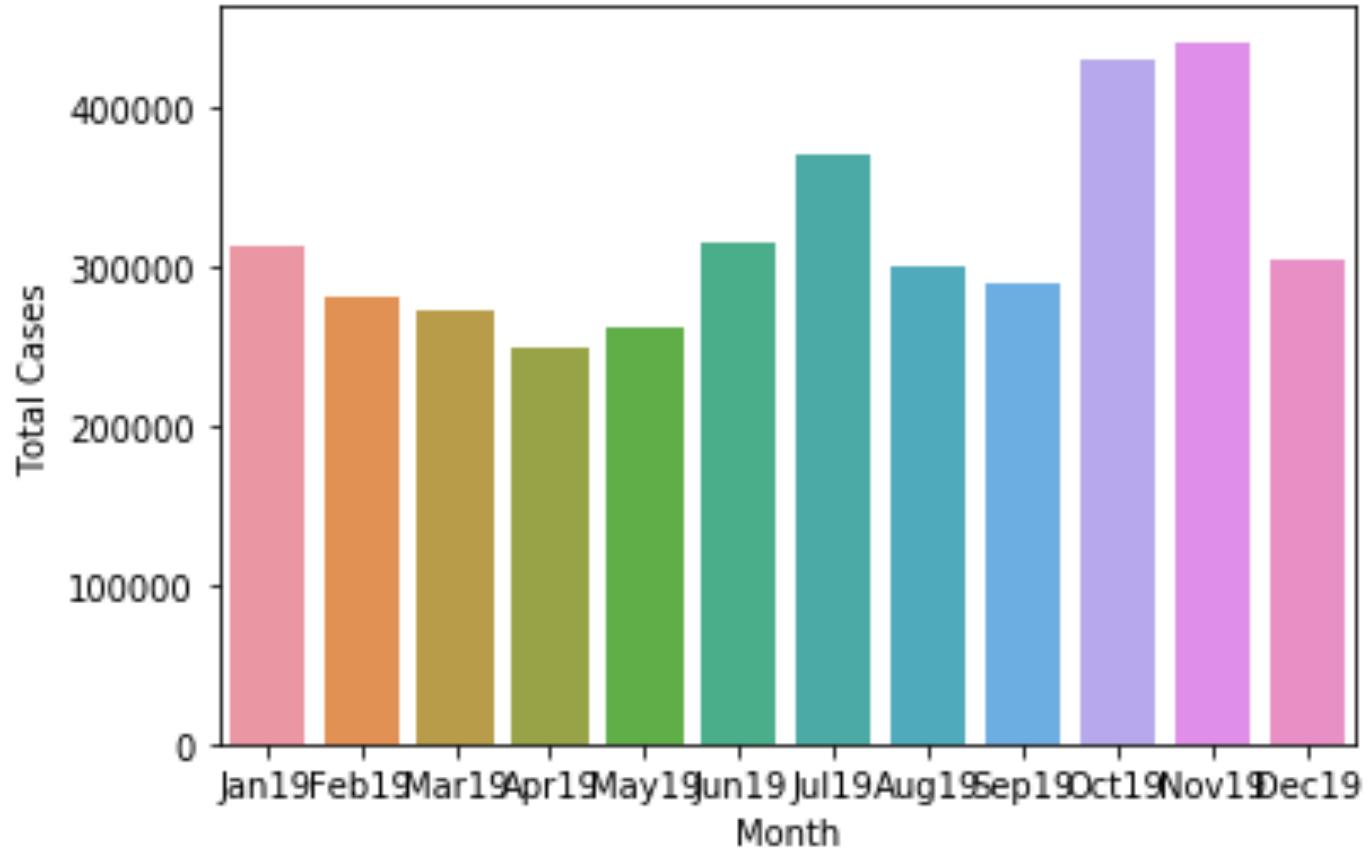
- Data cleaning
- Heat Maps for Regions in Ghana
- GIS maps
 - Ghana Covid Risk score
 - Proportion of cases reported in
 - May-July
 - Oct-Nov

Ghana Flu Trends 2019

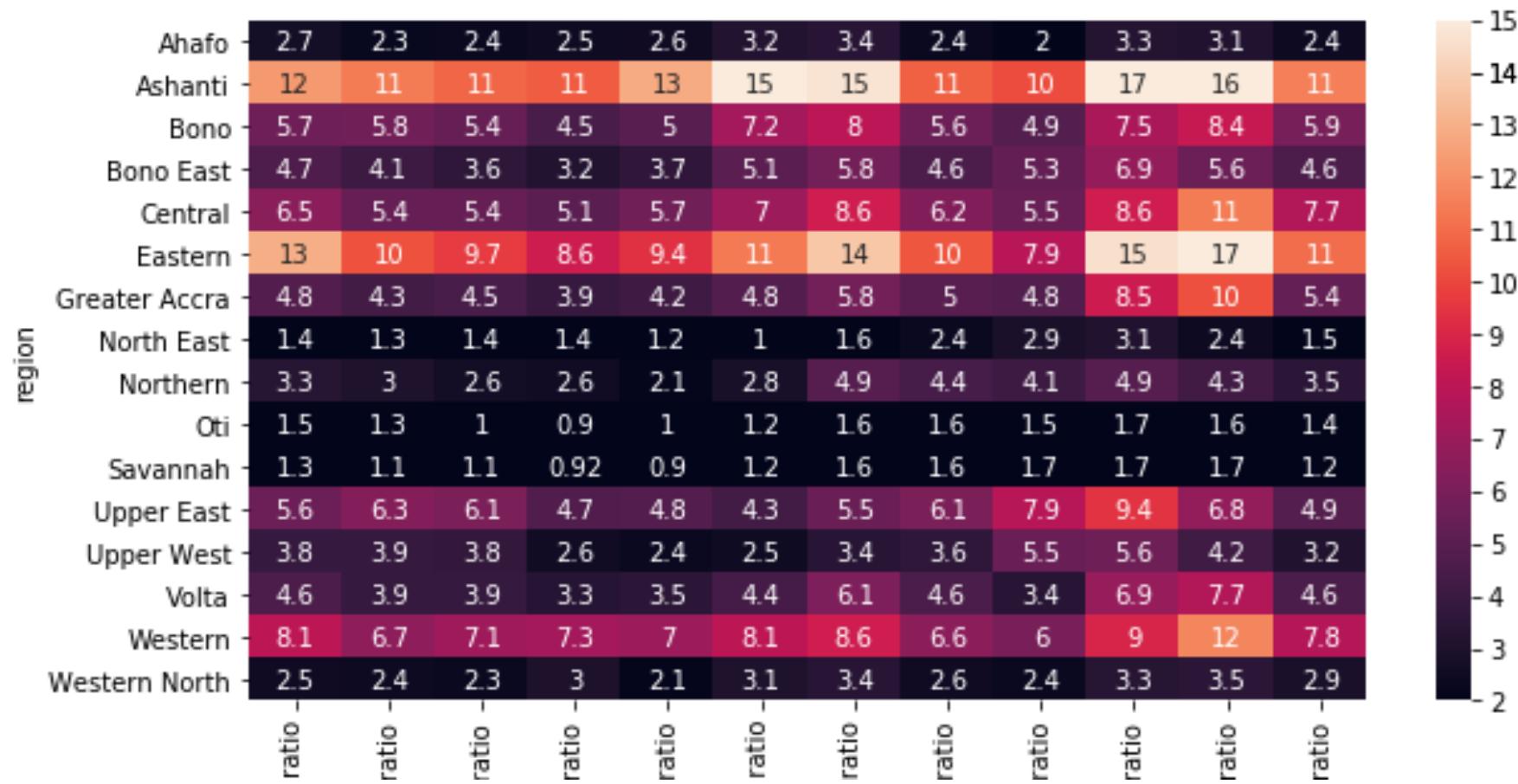
Two main peaks

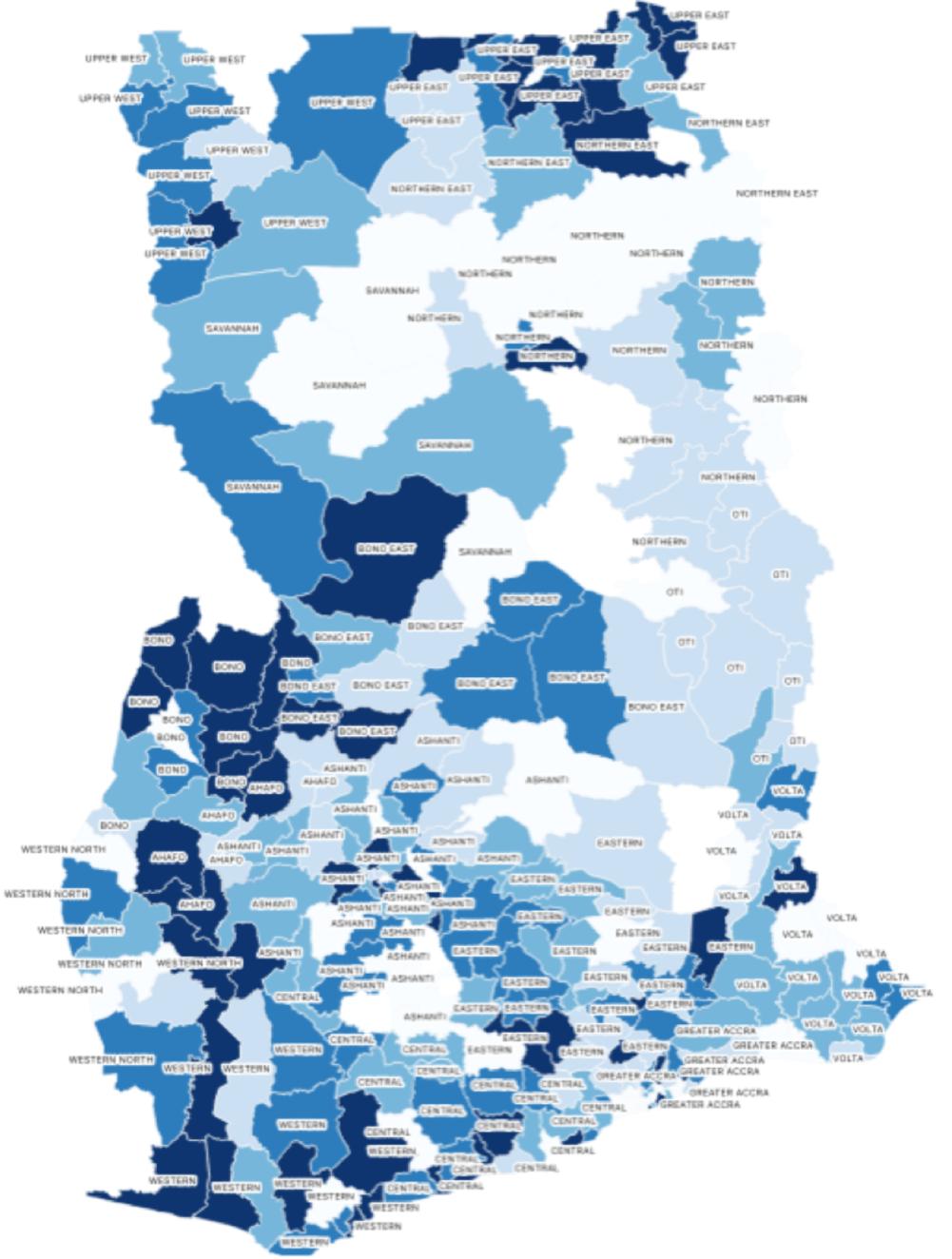
May-July

Octo-Nov



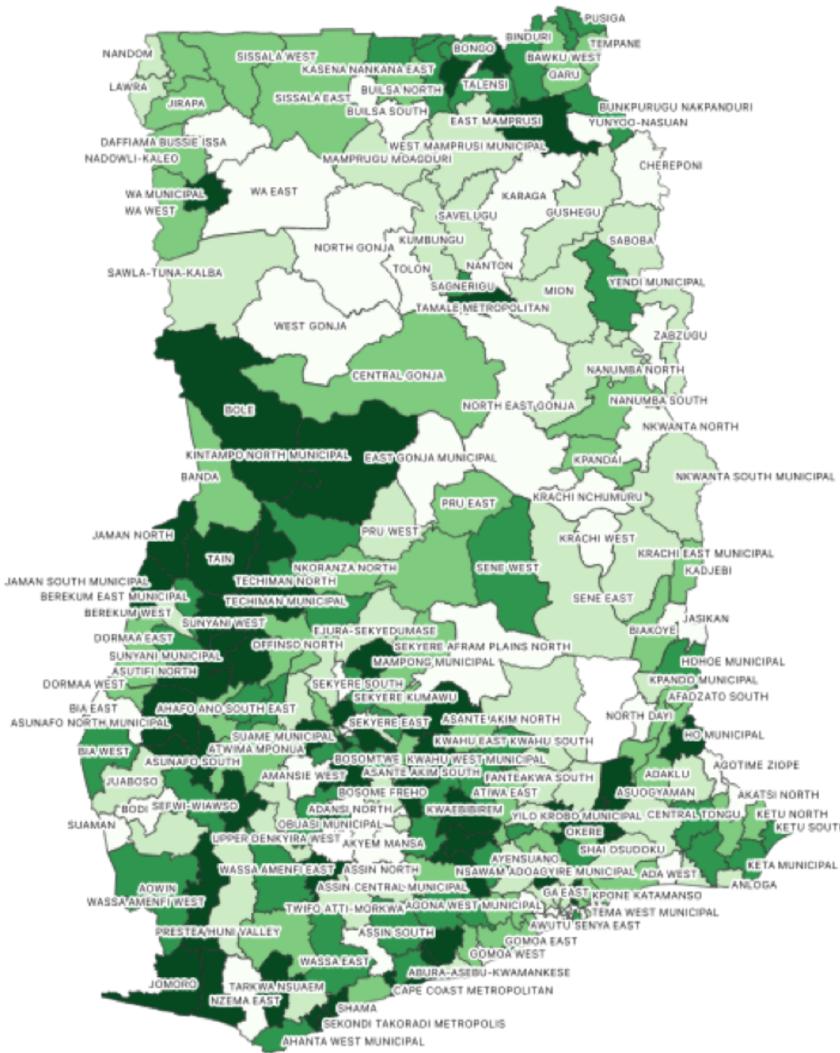
Heat Map of Flu Cases by Regions in Ghana



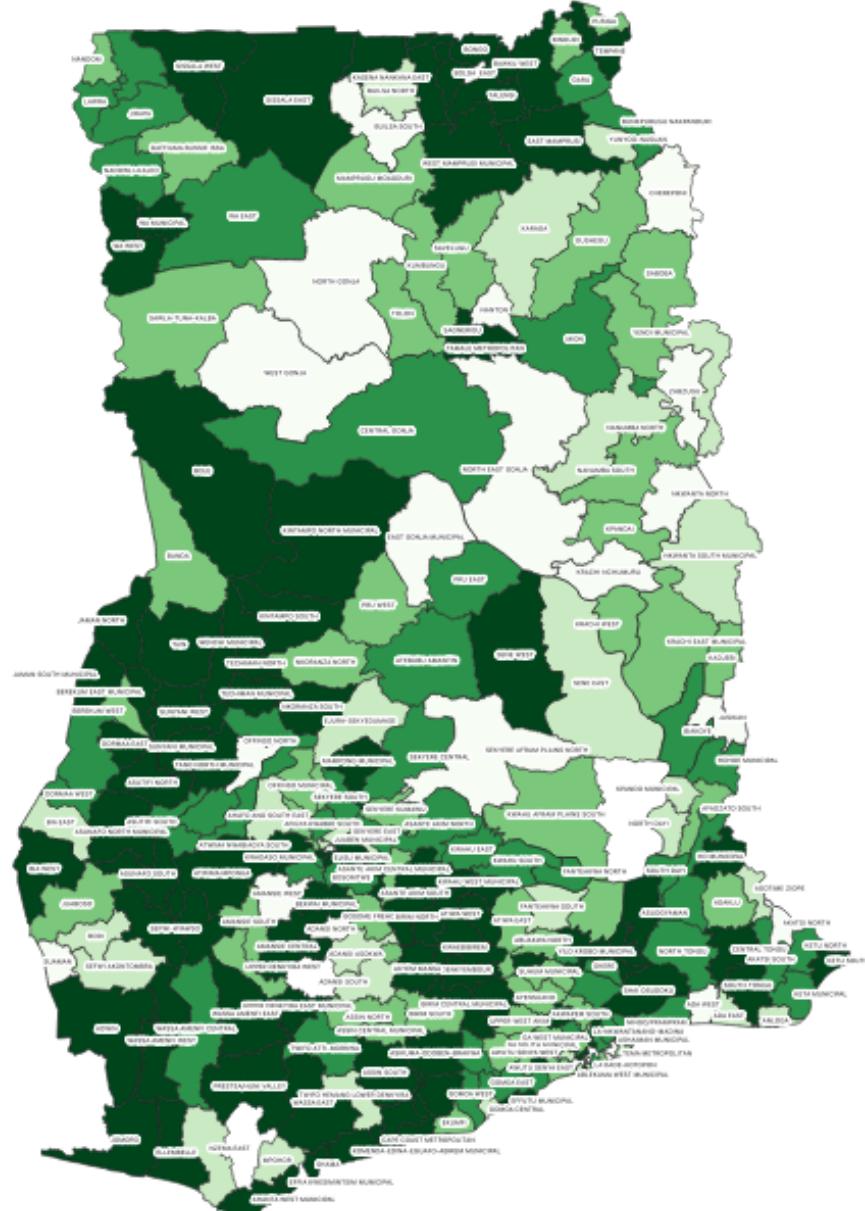


Ghana Covid-19 Risk Index

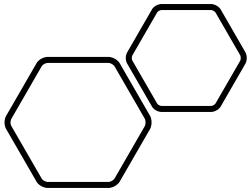
Disease	Weight
Hypertension	1
Diabetes	1
Malaria	0.5
Anemia	0.5
URTI	1



Ghana Flu cases
Proportion contributed
during flu season May-July



Ghana Flu cases
Proportion contributed
during flu season Oct-Nov



Key learnings



Regions

Second Flu season has more cases

Ashanti region >Eastern region> Western :Top 3



Districts

Within regions there variations in reported cases.

Districts should monitor yearly trends to identify outbreak.



Thank You